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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JAN ERIKSSON

Appeal 2009-0279
Application 09/581,911
Technology Center 3600

Decided:¹ February 13, 2009

Before: JENNIFER D. BAHR, LINDA E. HORNER, and
STEFAN STAICOVICI, *Administrative Patent Judges.*

BAHR, *Administrative Patent Judge.*

DECISION ON APPEAL

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 CFR § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

STATEMENT OF THE CASE

Jan Eriksson (Appellant) appeals under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 1-12 and 16-20. We have jurisdiction over this appeal under 35 U.S.C. § 6 (2002).

The Invention

Appellant's claimed invention is directed to an animal related apparatus comprising a robot for performing an animal related operation, such as teatcleaning with subsequent milking, at least one animal related device, such as milking equipment, and a control means including registering means for registering cumulative running values of the robot, the animal related device, and the animal related operation and means for generating a signal when a predetermined threshold running value has been reached for any one of the robot, the animal related device, and the animal related operation to indicate that maintenance is needed. Specification 1:5 and 1:22 to 2:29.

Claim 12, reproduced below, is illustrative of the claimed subject matter.

12. An animal related apparatus, comprising:
 - a milking robot (6) for performing an animal related operation related to milking an animal;
 - a control means (23) directing operation of said robot;
 - at least one animal related device (12a, 12b) operatively connected with said control means;
 - a robot arm (8) associated with said robot and adapted to move said animal related device towards an animal;

a registering means (20a, 20b,..., 20g)
provided for automatically registering cumulative
operating running values for each of i) said at least
one animal related device, ii) said robot, and iii) of
a complete animal related operation, wherein,

said control means is adapted to generate a
maintenance-need signal when reaching a
predetermined threshold value corresponding to
any of said cumulative running values, so that said
signal is automatically generated by said control
means when said registering means registers any
of said cumulative running value reaching said
corresponding predetermined threshold value.

The Rejections

The Examiner relies upon the following as evidence of
unpatentability:

Jakobson	US 4,508,058	Apr. 2, 1985
Paine	US 4,613,939	Sep. 23, 1986
Williams	US 5,754,451	May 19, 1998
Innings	WO 96/36212	Nov. 21, 1996

Appellants seek review of the Examiner's rejections under 35 U.S.C.
§ 103(a) of claims 1-4, 8-12, 19, and 20 as being unpatentable over
Jakobson, Paine, and Williams and claims 5-7 and 16-18 as being
unpatentable over Jakobson, Paine, Williams, and Innings.²

² This is the second appeal in this application. In the decision in Appeal No.
2005-0710, mailed March 31, 2005, a prior panel of this Board reversed
rejections of claims 1-10 under 35 U.S.C. § 103 as being unpatentable over
combinations of references that did not include either Paine or Williams.
Claims 1-10 were amended, and claims 11, 12, and 16-20 were added,
subsequent to the decision in the first appeal.

SUMMARY OF DECISION

We AFFIRM.

ISSUES

Appellant argues that the Examiner erred in rejecting claims 1-4, 8-12, 19, and 20 as being unpatentable over Jakobson, Paine, and Williams because (1) Paine and Williams are not analogous art to Appellant's invention (Appeal Br. 11-12); (2) Paine does not teach predetermined threshold values for discrete parts of a system and monitoring and maintaining separate cumulative running time values for each functioning device, for a robot that moves one of the devices, and for an overall animal related operation (Appeal Br. 9-11, 13-15); and (3) Williams does not teach registering a cumulative running value for a complete related operation in which plural components are used or generating a signal when a predetermined threshold value has been reached with respect to the related operation (Appeal Br. 11). In response, the Examiner contends that Appellant views too narrowly the teachings of Paine and Williams in characterizing them as non-analogous art. Answer 5. Further, the Examiner contends that Appellant attacks the references individually, rather than the collective teachings of the references. Answer 6. The Examiner points out that the rejection relies on Paine to show that establishing a predetermined threshold value for machinery components, registering the cumulative running value, and signalling when the threshold is reached was a known practice at the time of Appellant's invention. Answer 5. Likewise, the Examiner contends that Williams is cited to show that monitoring the components of a mechanical system individually in conducting preventative

maintenance practices was well known at the time of Appellant's invention.
Answer 6.

Appellant additionally argues that the Examiner erred in rejecting claims 5-7 and 16-18 as unpatentable over Jakobson, Paine, Williams, and Innings because the alarm in Innings is not related to the running value, the running time, or the number of pulsations of the pulsator. Appeal Br. 16. The Examiner reasons that it would have been obvious to a person of ordinary skill in the art to monitor the running time of the pulsator, and generate a signal when it reaches a predetermined threshold running value, since the pulsator is merely an additional mechanical device that requires routine maintenance. Final Rejection 6.

In light of the arguments and contentions of Appellant and the Examiner, the issues presented in this appeal are:

- Are Paine and Williams analogous art to Appellant's invention?
- Does Appellant demonstrate that the Examiner erred in determining that the combined teachings of Jakobson, Paine, and Williams would have prompted a person of ordinary skill in the art to provide registers for monitoring and maintaining cumulative running times for discrete components, such as the robot and the milking equipment of Jakobson, as well as for the entire milking operation, and means for generating a signal when any of the cumulative running time values reaches a predetermined discrete threshold provided for that component or operation?
- Does Appellant demonstrate error in the Examiner's determination that the combined teachings of Jakobson, Paine, Williams, and Innings would have prompted a person of ordinary skill in the art to

monitor and maintain a cumulative running time for a pulsator in the milking equipment of Jakobson?

FACTS PERTINENT TO THE ISSUES

- FF1 Jakobson teaches a cow milking method and apparatus comprising milking stalls 1 provided with a sensing means 3 and retaining means 4. Jakobson, col. 3, ll. 10-15. Jakobson's apparatus includes a robot 8 adapted to apply a milking means 6 to a cow's teats in response to a signal from the computer 5, and a unit 7 adapted, in response to a signal from computer 5, automatically to take the milking means 6 and clean and return them to the service position. Jakobson, col. 3, ll. 21-26 and 34-36.
- FF2 Jakobson's sensing means 3 transmit a signal to the computer 5 as soon as a cow arrives at the manger 2 of the stall in response to a transponder carried by each cow. Jakobson, col. 3, ll. 16-20. If the computer memory indicates that a predetermined time has passed since the cow was last milked, the retaining means 4 are activated to retain the cow in the stall for milking. Jakobson, col. 3, ll. 44-47. When the milking operation is complete, the computer 5 activates the unit 7 to take off the milking means 6 and retaining means 4 so that the cow can leave the stall. Jakobson, col. 3, l. 66 to col. 4, l. 2.
- FF3 Jakobson's robot 8 is returned to an inactive position once the milking operation has started. Jakobson, col. 3, ll. 61-63.
- FF4 Based on the above facts (FF1 through FF3), the individual components of Jakobson's apparatus, such as the robot 8, milking means 6, retaining means 4, unit 7, and computer 5, operate over

different periods of time. Certain components may be inactive while other components are operating.

- FF5 Jakobson does not disclose registering means for registering a cumulative running value for the components of the apparatus or the animal related operation.
- FF6 Paine evidences that it was well known at the time of Appellant's invention to provide registers for storing and updating cumulative running (elapsed) times for an apparatus and energizing a service indicator when the cumulative elapsed time reaches a predetermined programmable period of time (predetermined service time). Paine, col. 1, ll. 9-12; col. 2, ll. 12-33; col. 5, ll. 47-50; col. 5, l. 67 to col. 6, l. 6; col. 6, ll. 34-39.
- FF7 An exemplary application for Paine's invention is a programmable service reminder apparatus for a vehicle, for signaling the need for periodic maintenance that is performed in response to the accumulation of a predetermined number of hours of use of a vehicle. Paine, col. 1, ll. 25-27 and col. 2, ll. 12-13. Paine does not explicitly describe the invention as being directed to animal related apparatus.
- FF8 Paine also teaches accumulating the running (elapsed) times over multiple periods of operation of the apparatus. Paine, col. 8, ll. 11-16.
- FF9 Williams teaches a preventative maintenance and diagnostic system wherein a computer maintains a respective cycle count for each component of the machine and a display device alerts the operator when a cycle count for one of the components has reached a predetermined limit, which predetermined limit is indicative of a

- mean time between failures (MTBF) for the component. Williams, col. 2, ll. 1-10.
- FF10 Williams teaches storing a predetermined cycle limit, such as an MTBF, for each of the various parts, updating a total cycle count for each of the parts, comparing each total cycle count to the predetermined cycle limit for that part, and alerting the operator when the actual cycle count and predetermined cycle limit converge for a part. Williams, col. 4, ll. 19-22 and 27-36.
- FF11 Williams does not explicitly describe the disclosed preventative maintenance and diagnostic system as being directed to animal related apparatus.
- FF12 Innings describes a milking machine having a teatcup with a teatcup shell and liner forming a pulsation chamber between the shell and liner, a vacuum source, and a pulsator for generating a pulsating vacuum in the pulsation chamber to produce a pulsating movement of the teatcup liner. Innings 1:10-29.
- FF13 Innings teaches that teatcup liners soften as they get older, gradually diminishing their elasticity and resiliency resulting in a less gentle treatment and less effective massaging of the teat. Innings 3:4-6. According to Innings, the conventional method of choosing the point of time for the replacement of the liners utilized a more or less fixed predetermined scheme. Innings 3:11-14. Innings proposes an alternative method of selecting a replacement time comprising detecting the time at which the teatcup liner abruptly moves to one of the open or closed positions and signaling a malfunction if the

detected point of time is outside a predetermined interval. Innings 5:33 to 6:2.

FF14 The Examiner determined that it would have been obvious to provide a lined pulsating teatcup as described by Innings in the milking means of Jakobson. Final Rejection 6. Appellant does not dispute this determination.

FF15 Appellant's invention is a control means including registering means for registering cumulative running values of a robot, an animal related device, and an animal related operation and means for generating a signal when a predetermined threshold running value has been reached for any one of the robot, the animal related device, and the animal related operation to indicate that maintenance is needed. Specification 1:22 to 2:29. Claims 1, 11, and 12.

PRINCIPLES OF LAW

While the requirement of demonstrating a teaching, suggestion, or motivation to combine known elements in order to show that the combination is obvious may be “a helpful insight,” it cannot be used as a rigid and mandatory formula. *KSR Int'l. Co. v. Teleflex Inc.*, 550 U.S. 398, ___, 127 S. Ct. 1727, 1741 (2007). Moreover, while there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness, “the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *Id.*

“A person of ordinary skill is also a person of ordinary creativity, not an automaton.” *Id.* at ___, 127 S. Ct. at 1742.

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

Id. at ___, 127 S. Ct. at 1740. We must ask whether the improvement is more than the predictable use of prior art elements according to their established functions. *Id.*

“A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem.” In other words, “familiar items may have obvious uses beyond their primary purposes.”

In re ICON Health and Fitness, Inc., 496 F.3d 1374, 1379-80 (Fed. Cir. 2007) (citations omitted). Moreover, in making a determination with regard to obviousness, we should not limit ourselves to looking only at the problem Appellant was trying to solve. The question is not whether the combination was obvious to Appellant but whether it was obvious to a person with ordinary skill in the art. Thus, “[u]nder the correct analysis, any need or problem known in the field of endeavor at the time of invention and

addressed by the patent can provide a reason for combining the elements in the manner claimed.” *KSR*, 550 U.S. at ___, 127 S. Ct. at 1742.

ANALYSIS

Claims 1-4, 8-12, 19, and 20

Appellant states that claims 1-4 and 8-10 stand or fall together, claim 11 stands or falls alone, and claims 12, 19, and 20 stand or fall together. Appeal Br. 7. The issues presented are the same for each of independent claims 1, 11, and 12. We thus address these claims together.

Appellant argues that the Examiner has not made factual findings as to the level of ordinary skill in the pertinent art and thus is not in a position to evaluate the question of obviousness. Reply Br. 5. This argument is not persuasive of error in the Examiner’s rejection, as the cited art in this case is representative of the level of ordinary skill in the art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (“[T]he absence of specific findings on the level of skill in the art does not give rise to reversible error ‘where the prior art itself reflects an appropriate level and a need for testimony is not shown’”) (quoting *Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 163 (Fed. Cir. 1985).

Paine and Williams are not explicitly directed to animal related apparatus. FF7 and FF11. Although Paine and Williams may not be from Appellant’s field of endeavor, they are nevertheless reasonably pertinent to Appellant’s invention because, like Appellant’s invention (FF15), they deal with maintaining and monitoring accumulated running times of apparatus and apparatus components to generate maintenance signals when the accumulated running time reaches a predetermined limit (FF6 through

FF10). Accordingly, they logically would have commended themselves to an inventor's attention in considering Appellant's problem. Paine and Williams thus are both analogous art to Appellant's invention.

Jakobson teaches the robot and at least one animal related device called for in independent claims 1, 11, and 12. FF1 and FF2. Jakobson does not disclose registering means for registering a cumulative running value for the components of the apparatus and the animal related operation, as also called for in claims 1, 11, and 12. FF5.

Nonobviousness cannot be established by attacking the references individually when the rejection is predicated upon a combination of prior art disclosures. *See In re Merck & Co. Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). While neither Paine nor Williams individually teaches registering cumulative running times for both an entire apparatus (or an operation performed by said apparatus) and for individual components of the apparatus, the Examiner's rejection is not based on either reference alone. Rather, the rejection is based on the combined teachings of Jakobson, Paine, and Williams.

Paine illustrates that it was well known at the time of Appellant's invention to provide registering means for registering and accumulating a running time for an apparatus and to activate a maintenance signal when the accumulated running time reaches a predetermined programmable period of time (predetermined service time). FF6. Paine also teaches accumulating the running (elapsed) times over multiple periods of operation of the apparatus. FF8. Williams illustrates that it was also well known at the time of Appellant's invention to store a predetermined service interval for each component of a machine, to maintain and update an actual running interval

of each component, and to generate an alert when the actual running interval reaches the predetermined service interval. FF9 and FF10. A person of ordinary skill in the art, also being a person of ordinary creativity, and not an automaton, would have recognized that the components of Jakobson's milking apparatus, such as the robot 8, milking means 6, retaining means 4, unit 7, and computer 5, are components that require periodic inspection and/or maintenance. Such a person also would have understood from Jakobson that the individual components of Jakobson's apparatus operate over different periods of time and are not all operating over the entire period during which a cow is in the stall and monitored or milked by the apparatus (i.e., the animal related operation); certain components may be inactive while other components are operating. FF4. Consequently, a person of ordinary skill in the art would have recognized that the well known concepts described by Paine and Williams of registering and updating cumulative running times both for an entire apparatus and for individual components of the apparatus and generating a maintenance signal when any of the cumulative running times reaches a predetermined running time limit for the component or the entire apparatus would improve the apparatus of Jakobson in the same way that they improve the apparatus (vehicle) of Paine or the machine of Williams. Appellant does not argue, much less prove, that modification of Jakobson's computer to provide such registering means, comparing means, and signaling means for monitoring the running times of the individual components of the apparatus, such as the robot 8, the milking means 6, and the unit 7, as well as the entire animal related operation to indicate the running time of the entire apparatus, and generate a maintenance signal when a predetermined running time limit is reached would have been

beyond the technical grasp of a person of ordinary skill in the art or yielded unexpected or unpredictable results.

For the above reasons, Appellant fails to demonstrate the Examiner erred in determining that the combined teachings of Jakobson, Paine, and Williams would have prompted a person of ordinary skill the art to provide registers for monitoring and maintaining cumulative running times for discrete components, such as the robot and the milking equipment of Jakobson, as well as for the entire milking operation, and means for generating a signal when any of the cumulative running time values reaches a predetermined discrete threshold provided for that component or operation.

Claims 5-7 and 16-18

Appellant states that claims 5-7 and 16-18 stand or fall together. Appeal Br. 15. Thus, in accordance with 37 C.F.R. § 41.37(c)(1)(vii), we select claim 5 as the representative claim to decide the appeal of this rejection, with claims 6, 7, and 16-18 standing or falling with claim 5.

Appellant does not dispute the Examiner's determination that it would have been obvious to provide a lined pulsating teatcup as described by Innings in the milking means of Jakobson. FF14. Such a teatcup includes a shell, liner, and pulsator. FF12. Appellant thus concedes a teatcup shell, liner, and pulsator as obvious components of Jakobson's milking means. In arguing that the Examiner erred in rejecting claim 5 as unpatentable over Jakobson, Paine, Williams, and Innings because the alarm in Innings is not related to the running value, the running time, or the number of pulsations of the pulsator, Appellant is attacking Innings individually rather than addressing the combination of references applied by the Examiner. For the reasons discussed above with respect to claims 1, 11, and 12, Appellant fails

to demonstrate the Examiner erred in determining that the combined teachings of Jakobson, Paine, and Williams would have prompted a person of ordinary skill the art to provide registers for monitoring and maintaining cumulative running times for discrete components, such as the robot and the milking equipment of Jakobson, as well as for the entire milking operation, and means for generating a signal when any of the cumulative running time values reaches a predetermined discrete threshold provided for that component or operation. Appellant thus also fails to persuade us of error in the Examiner's position that it would have been obvious to monitor the running time of the pulsator in the same way, since it is merely an additional component of the apparatus that likewise requires routine maintenance.

CONCLUSIONS

- Paine and Williams are analogous art to Appellant's invention.
- Appellant fails to demonstrate that the Examiner erred in determining that the combined teachings of Jakobson, Paine, and Williams would have prompted a person of ordinary skill the art to provide registers for monitoring and maintaining cumulative running times for discrete components, such as the robot and the milking equipment of Jakobson, as well as for the entire milking operation, and means for generating a signal when any of the cumulative running time values reaches a predetermined discrete threshold provided for that component or operation.
- Appellant fails to demonstrate error in the Examiner's determination that the combined teachings of Jakobson, Paine, Williams, and Innings would have prompted a person of ordinary skill in the art to

monitor and maintain a cumulative running time for a pulsator in the milking equipment of Jakobson.

In light of the above, Appellant fails to demonstrate error in the Examiner's rejections of claims 1-4, 8-12, 19, and 20 as being unpatentable over Jakobson, Paine, and Williams and claims 5-7 and 16-18 as being unpatentable over Jakobson, Paine, Williams, and Innings.

DECISION

The Examiner's decision is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED

vsh

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